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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/528,331 | 03/18/2005 | Alexandr Mikhailovich Derevyagin | U 015623-3 | 6772 |

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| EXAMINER | |
|---|---|
| JAGAN, MIRELLYS | |
| **ART UNIT** | **PAPER NUMBER** |
| 2859 | |

DATE MAILED: 06/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/528,331 | DEREVYAGIN ET AL. | |
| | Examiner | Art Unit | |
| | Mirellys Jagan | 2859 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *18 March 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-6* is/are rejected.

7)☒ Claim(s) *2* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 March 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/18/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Information Disclosure Statement*

1. The information disclosure statement filed 3/18/05 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to in the references designated "AM", "AN", and "AS" has not been considered.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1 and 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,022,045 to Elliot in view of U.S. Patent 5,052,818 to Nishazawa et al [hereinafter Nishazawa].

Elliot discloses a method for dew point measurement, comprising feeding gas to be studied onto a cooled element with a condensation surface onto which a light flux is directed and registering the value of the light flux reflected from the condensation surface, advent of the dew point being determined on the basis of the registered value, characterized in that a light flux polarized in a plane of its incidence is used, and the angle at which it is directed onto the condensation surface of the cooled element is selected so that there is no reflection of the light flux in the absence of a condensate from the condensation surface of the cooled element;

wherein the device for dew point measurement comprises:

a housing equipped with a sampling tube, the housing containing a cooled element provided with a condensation surface and connected through an optical element to a radiator, the housing further containing a register, cooler and temperature sensor, characterized in that the cooled element provided with a condensation surface is made in the form of a plate, the radiator being in the form of a source of light polarized in the plane of incidence thereof,

wherein the optical element is positioned in such a manner that the light flux of the source of polarized light is directed onto the condensation surface of the cooled element, preferably at a Brewster angle, the tangent of which is equal to the refraction index; and the housing is equipped with a cooler and a temperature sensor, which are mounted on the sampling

tube thereof (see figure 8; column 4, lines 39-43 and 53-60; column 5, lines 4-8 and 15-36; column 5, lines 52-68; and column 9, lines 13-49).

Elliot does not disclose the material of the cooled element, and therefore does not disclose it being made of a dielectric material; the direction of the polarized light flux onto the condensation surface of the cooled element is selected at an angle within the range of ±9° of the value of the Brewster angle; and the device is provided with at least one additional register serving for measurement of scattered beams reflected from the surface of the formed condensate.

Nishazawa discloses an apparatus for measuring dew point comprising a housing containing a cooled element provided with a condensation surface and connected through an optical element to a radiator, the housing further containing a register, cooler and temperature sensor, characterized in that the cooled element provided with a condensation surface is made in the form of a dielectric plate since it enables measurement of dew points of –80°C or less. The angle of the light flux directed onto the cooled element is less than 10° in order to increase sensitivity of a change in the intensity of scattered light detected. The device may have more than one register for increasing measurement sensitivity (see column 5, lines 5-28 and 55-60; column 6, lines 29-48; column 6, line 55-column 7, line 2; column 8, line 65-column 9, line 11; and column 10, lines 5-12).

Referring to claims 1 and 3, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method and device of Elliot by using a dielectric material for the cooled element since Nishazawa teaches that a dielectric material is useful because it enables measurement of dew points of –80°C or less.

Referring to claim 4, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Elliot and Nishazawa by making the angle of the light flux to be within the range of ±9° of the value of the Brewster angle since Nishazawa teaches that an angle of less than 10° is useful because it increases sensitivity of a change in the intensity of scattered light detected.

Referring to claim 5, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Elliot and Nishazawa by providing an additional register since Nishazawa teaches that additional registers are useful for increasing measurement sensitivity.

***Allowable Subject Matter***

5. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not disclose or suggest the following in combination with the remaining limitations of the claim:

A method for dew point measurement characterized in that the concentration of condensed admixtures in a predetermined volume of the studied gas is determined on the basis of the value of the thickness of the film formed during a certain period of time (see claim 2).

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references disclose a dew point detector:

U.S. Patent 5,470,154 to Nishizawa et al
U.S. Patent 4,701,052 to Schoen, Jr.
U.S. Patent 5,396,325 to Carome et al
U.S. Patent 5,460,450 to Buck
U.S. Patent 5,072,595 to Barbier
U.S. Patent 4,799,235 to Bannell et al
U.S. Patent 5,971,609 to Kijima et al
U.S. Patent 4,946,288 to Siska et al
U.S. Patent 5,139,344 to Mutter
U.S. Patent 4,083,224 to Gayst
U.S. Patent 6,926,439 to Zlochin
U.S. Patent 5,482,371 to Nishizawa et al
U.S. Patent 4,629,333 to Dosoretz et al
U.S. Patent 4,345,455 to Hayes, Jr.
U.S. Patent 3,623,356 to Bisberg
U.S. Patent 3,319,457 to Leone
U.S. Patent 3,195,344 to Francisco
U.S. Patent 3,166,928 to Jackson et al
U.S. Patent 4,826,327 to Michell

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mirellys Jagan whose telephone number is 571-272-2247. The examiner can normally be reached on Monday-Friday from 11AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJ
June 14, 2006

**Mirellys Jagan**
**Patent Examiner**
**Technology Center 2800**